March 15, 1949.

Dr. Aaron Novick,
Institute of Radiobiology etc.,
University of Chicago,
Chicago 37, Ill.

Dear Aaron:

Thanks for sending through the reimbursement checks so promptly; our car is nearly paid for now.

Continuing work on lambda: first, absorption studies. It rather looks as if absorption is reversible here, although I don't have high enough titre stocks to do the critical experiments conveniently. Heat killed cells remove about ½ the phage from the supernatant, but apparently liberate it again, as most of the absorbed phage can be recovered by plating the sedimented heat-killed cells. Another indication comes from the fact that the free phage is at least as sensitive to heat as the bacteria (i.e. complete inactivation at 1 hr. 56 C.), but heat killed lysogenic bacteria liberate a small amount of phage when plated on sensitive bacteria. As a result, it is going to be a little inconvenient to do absorption studies, especially on lysogenic bacteria: I'll have to separate the cells from the phage mechanically in every case, and probably with filtration/

We're isolating a number of new phages from sewage. So far none of about 15 tested is excluded by lambda. None of the T1- T7 phages induces lysogenicity in our retests. One of the new sewage phages is showing a somewhat anomalous behavior, appearing to multiply to a limited extent at the expense of resistant bacteria. The symbiosis is rather unstable (unlike lambda) but I think there's more to it than the "nibbled colonies" sort of affair. The phage is propagated for several mass transfers, but when plated out, no single bacterial colonies/ appear to carry it.

I would appreciate a small favor, if you find it convenient. First, I could use a set of B resistant indicators for various phages (I have B/1 and /1,5; could use B, B/r, and B/ 2, 2h, 2,4 3,4,7, etc...) Secondly, Chicago sewage is likely to be a richer source of diverse phages than Madison. Could you send me a bottle? Thanks.

Best regards,

Sincerely,